

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT AND
THE WRITTEN OPINION OF THE INTERNATIONAL
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

To: D. KLIGLER I.P. SERVICES LTD. P.O. BOX 33111 61330 TEL AVIV ISRAEL
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Date of mailing
(day/month/year)

16 OCT 2009

Applicant's or agent's file reference 1034-1003.2
International application No. PCT/IB 09/51919

FOR FURTHER ACTION See paragraphs 1 and 4 below

International filing date
(day/month/year) **10 May 2009 (10.05.2009)**

Applicant **AXXANA (ISRAEL) LTD.**

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 8270

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 1034-1003.2	FOR FURTHER ACTION <div style="display: flex; justify-content: space-between; font-size: small;"> see Form PCT/ISA/220 as well as, where applicable, item 5 below. </div>	
International application No. PCT/IB 09/51919	International filing date (<i>day/month/year</i>) 10 May 2009 (10.05.2009)	(Earliest) Priority Date (<i>day/month/year</i>) 19 May 2008 (19.05.2008)
Applicant AXXANA (ISRAEL) LTD.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

- ☒ as suggested by the applicant.
- ☐ as selected by this Authority, because the applicant failed to suggest a figure.
- ☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 09/51919

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G06F 13/00 (2009.01)

USPC - 711/162

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
USPC: 711/162Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 711/162 (keyword limited - see terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

USPTO WEST (PGPB, USPT, EPAB, JPAB); GOOGLE

Search Terms Used: disaster, backup, outage, storage, recovery, memory, unavailable, successful, unsuccessful, secondary, device, switch, change, alternative, fault, error, damage, notification, warning, delete, erase, transfer, cache, temporary

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2007/0094467 A1 (YAMASAKI) 26 April 2007 (26.04.2007), entire document, especially; para [0009]-[0010], [0052]-[0053], [0064]-[0068], [0075]	1 - 26
Y	US 2008/0104443 A1 (AKUTSU et al.) 01 May 2008 (01.05.2008), entire document, especially; para [0079]-[0081], [0086]-[0094], [0155]-[0158], [0219]-[0224], [00240], [0310]-[0316], [0467]-[0468], [0613]-[0618]	1 - 26
A	US 6,226,651 B1 (MASUDA et al.) 01 May 2001 (01.05.2001), entire document	1 - 26
A	US 5,889,935 A (OFEK et al.) 30 March 1999 (30.03.1999), entire document	1 - 26

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

09 October 2009 (09.10.2009)

Date of mailing of the international search report

16 OCT 2009

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300

PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: D. KLIGLER I.P. SERVICES LTD.
P.O. BOX 33111
61330 TEL AVIV
ISRAEL

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) **16 OCT 2009**

Applicant's or agent's file reference
1034-1003.2

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/IB 09/51919

International filing date (day/month/year)

10 May 2009 (10.05.2009)

Priority date (day/month/year)

19 May 2008 (19.05.2008)

International Patent Classification (IPC) or both national classification and IPC

IPC(8) - G06F 13/00 (2009.01)

USPC - 711/162

Applicant AXXANA (ISRAEL) LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-3201

Date of completion of this opinion

09 October 2009 (09.10.2009)

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300
PCT OSP: 571-272-7774

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/IB 09/51919

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
 - a. (means)
 - ☐ on paper
 - ☐ in electronic form
 - b. (time)
 - ☐ in the international application as filed
 - ☐ together with the international application in electronic form
 - ☐ subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/IB 09/51919

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement			
1. Statement				
Novelty (N)	Claims	1 - 26	YES	
	Claims	None.	NO	
Inventive step (IS)	Claims	None.	YES	
	Claims	1 - 26	NO	
Industrial applicability (IA)	Claims	1 - 26	YES	
	Claims	None.	NO	
2. Citations and explanations:				
<p>Claims 1 - 26 lack an inventive step under PCT Article 33(3) as being obvious over US 2007/0094467 A1 (Yamasaki), in view of US 2008/0104443 A1 to Akutsu et al. (hereinafter 'Akutsu').</p> <p>As per claims 1 and 14, Yamasaki discloses a method (and corresponding apparatus) for data protection, comprising: in a first operational mode, sending data items for storage in a primary storage device and in a secondary storage device, while temporarily caching the data items in a disaster-proof storage unit and subsequently deleting the data items from the disaster-proof storage unit, wherein each data item is deleted from the disaster-proof storage unit upon successful storage of the data item in the secondary storage device (see para [0009]-[0010], [0052]-[0053]) but does not explicitly disclose receiving an indication of a fault related to storage of the data in the secondary storage device. Akutsu, however, discloses receiving an indication of a fault related to storage of the data in the secondary storage device (see para [00240]); and responsively to the indication, switching to operating in a second operational mode in which the data items are sent for storage at least in the primary storage device and are cached and retained in the disaster-proof storage unit irrespective of the successful storage of the data items in the secondary storage device (see para [0310]-[0316]). It would have been obvious to one of ordinary skill in the art to combine the teachings of Yamasaki with Akutsu because adding an indication of fault for the secondary storage device introduces a valuable scenario in disaster situations which enables the proper caution and remedies to take place to ensure data protection, thus increasing the overall appeal of Yamasaki.</p> <p>As per claims 2 and 15, Akutsu further discloses wherein the data items comprise Input/Output (I/O) transactions that are received from one or more applications, and wherein operating in the second operational mode comprises continuing to receive the I/O transactions from the applications while the fault is present (see para [0079]-[0081], [0086]-[0089]).</p> <p>As per claims 3 and 16, Yamasaki further discloses wherein switching to operating in the second operational mode comprises operating in the second operational mode for a predefined time duration following the indication, and switching back to the first operational mode after the predefined time duration (see para [0068], [0075]).</p> <p>As per claims 4 and 17, Akutsu further discloses after switching to operating in the second operational mode, receiving a notification related to memory unavailability in the disaster-proof storage device, and performing an action responsively to the notification (see para [0094], [0467]-[0468]).</p> <p>As per claims 5 and 18, Akutsu further discloses wherein performing the action comprises switching back to the first operational mode responsively to the notification (see para [0923]).</p> <p>As per claims 6 and 19, Yamasaki further discloses wherein performing the action comprises prompting a user responsively to the notification (see para [0064]-[0065]).</p> <p>As per claims 7 and 20, Akutsu further discloses wherein performing the action comprises selecting the action from a group of actions comprising: refusing to accept subsequent data items following the notification (see para [0155]-[0158]); and storing the subsequent data items only in the primary storage device (see para [0155]-[0158]).</p> <p>As per claims 8 and 21, Akutsu further discloses wherein selecting the action comprises choosing the action responsively to a predefined configuration parameter (see para [0091]-[0092]).</p> <p>As per claims 9 and 22, Yamasaki further discloses following correction of the fault, sending the data items retained in the disaster-proof storage device for storage in the secondary storage device (see para [0067]-[0070]).</p> <p>As per claims 10 and 23, Akutsu further discloses wherein operating in the second operational mode comprises allowing acceptance of subsequent data items for a predefined time period following the indication, responsively to determining that the fault is associated with an unidentifiable software failure (see para [0613]-[0618]).</p> <p>As per claims 11 and 24, Akutsu further discloses continuing to operate in the first operational mode irrespective of the indication responsively to determining that the fault is associated with an identifiable software failure (see para [0094], [0219]-[0224]).</p> <p>- continued in supplemental box -</p>				

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/IB 09/51919

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

V.2. Citations and explanations:

As per claims 12 and 25, Akutsu further discloses refusing to accept subsequent data items for a predefined time period responsively to detecting a failure in caching the data items in a disaster-proof storage unit (see para [0156]-[0158], [0653]-[0659]).

As per claims 13 and 26, Akutsu further discloses wherein the data items are accepted from one or more software applications, and wherein refusing to accept the subsequent data items comprises: initially refusing to accept the subsequent data items for a first time period that does not disrupt the software applications (see para [0246]-[0253]); and responsively to an assessed cause of the failure, continuing to refuse to accept the subsequent data items for a second time period that is longer than the first time period (see para [0246]-[0253]).

Claims 1 - 26 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.